

I 30475-68

ACCESSION NR: A15006057

ASSOCIATION: Genskiy pedinstitut (Gen research and institute)

SUBMITTED: 1941/10/1

NR REF G V: 100

Card 1/1

L 23240-66 EWT(1) IJP(c)

ACC NR: AF6009151

SOURCE CODE: UR/0139/65/000/005/0145/0152

AUTHOR: Chernenko, V. P.; Lukantsever, Yu. L.; Zaitov, F. N.

ORG: Osha Pedagogical Institute (Oshskiy pedagogicheskiy institut)

TITLE: Investigation of the mechanism of destruction of color centers and of non-stationary recombination luminescence of the crystal phosphor NaCl-Ag. I

SOURCE: IVUZ. Fizika, no. 5, 1965, 145-152

TOPIC TAGS: crystal phosphor, color center, recombination luminescence, silver chloride, absorption spectrum, emission spectrum, luminescence spectrum

ABSTRACT: This is a continuation of earlier work (Optika i spektroskopiya v. 15, 86, 1963) on thermoluminescence in synthetic NaCl-Ag crystal phosphor. The present article continues the investigation of nonstationary luminescence spectra, thermoluminescence, and thermal discoloring in a wider range of temperatures (from 100 to 550K). The NaCl-Ag crystal phosphor was grown from the melt and excited with x rays at exposures ranging from 30 to 240 minutes. A specially designed cryostat described elsewhere by one of the authors (Lukantsever, Dissertation, Tomsk, 1959) was used for the low-temperature measurements. The absorption spectra at all temperatures, and the integral thermoluminescence and thermal discolor-

Card 1/2

L 23240-66

ACC NR: AF6009151

2

ing of the crystals at various temperatures were recorded with a photometer consisting of a photomultiplier (FEU-29), a dc amplifier and an automatic recording potentiometer (EPP-09). The emission spectra were registered with a photometer consisting of a photomultiplier, dc amplifier, and a loop oscilloscope. In addition, a composite technique was used to investigate the destruction of the 355-, 465-, and 720-nm color centers of the phosphor. The spectra were found to vary greatly with the x-ray dose and with the prior heat treatment of the sample. The nature of the different centers is analyzed and the possibility of ion-electron and ion-hole mechanisms for their destruction at low temperatures is discussed. The authors thank Doctor of Physicomathematical Sciences Ch. B. Lushchik for a discussion of problems touched upon in the article and Yu. N. Yevstifayev for help with the experiment. Orig. art. has: 5 figures and 2 tables.

SUB CODE: 20/ SUBM DATE: 15May63/ ORIG REF: 014/ OTH REF: 004

Card 2/2 MGS

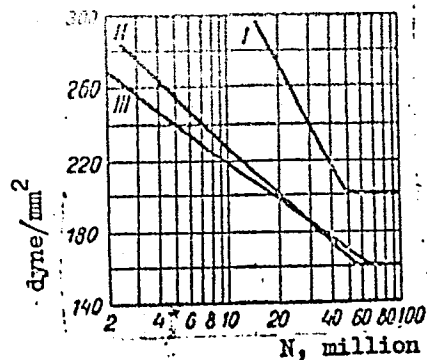
L 10328-67 EWP(k)/EWT(m)/EWP(w)/EWP(t)/ETI IJP(c) JD	
ACC NR: AP6020918	SOURCE CODE: UR/0369/66/002/002/0204/0208
AUTHORS: Bezruchko, I. V.; Golovinskaya, T. M.; Gorb, M. L.; Panchenko, N. P.; Chernenko, V. S.; Chernyak, N. I.	
ORG: Mechanics Institute of the AN UkrSSR, Kiev (Institut mekhaniki AN UkrSSR); First GPZ, Moscow (Pervyy GPZ)	
TITLE: Effects of the physical condition of the surface layer, formed during grinding on the contact wear resistance of steel ShKh15	
SOURCE: Fiziko-khimicheskaya mekhanika materialov, v. 2, no. 2, 1966, 204-208	
TOPIC TAGS: surface fatigue, surface property, metal friction, steel property, grinding wheel, electron microscope, steel, x-ray equipment/ ShKh15 steel, EB60SM2K grinding wheel, E46SM2K grinding wheel, LHM-8M microscope, UEM-100 electron microscope, UPS-50I x-ray equipment	
ABSTRACT: The effects of the structure and depth of structural gradients on the surface fatigue of ShKh15 steel were investigated. Thirty-five millimeter diameter x 10-mm thick disc-shaped specimens were heat-treated and ground using wheel EB60SM2K and finish-ground with wheel E46SM2K. Three grinding regimes (0.005 mm/rev, 0.15 mm and 0.25 mm) were used to produce structural changes in layers of 10--20, 150--160, and 220--250 micron respectively. After lapping to an 11--12 class finish, surface fatigue tests were performed at 1750 rpm using methods described by M. A. Puzanov	
Card 1/2	

L 10326-67

ACC NR: AP6020918

(Sb. Povysheniye iznosostoykosti detaley mashin, Izd. AN UkrSSR, 1956, No. 22). Microstructural studies of the surface layers were performed using optical and electron microscopes (MIM-OM and UEM-100 respectively) and x-ray equipment (UPS-501). A discussion of the structural changes for the different grinding regimes is included, and the experimental results are summarized in Fig. 1.

Fig. 1. Surface fatigue of group I, II, and III specimens (corresponding to structural changes in layers of 10--20, 150--160, and 220--250 micron respectively)



Orig. art. has: 5 figures."

SUB CODE: 11,13/ SUBM DATE: 17Jul65/ ORIG REF: 003

L 06369-67 EWP(W)/EWP(t)/ET2 LJP(c) JD/DJ
 ACC NR: AP6027489 (A) SOURCE CODE: UR/0418/66/000/003/0063/0066

AUTHOR: Bezruchko, I. V. (Engineer); Golovinskaya, T. M. (Engineer); Gorb, M. L. (Engineer); Panchenko, N. P. (Engineer); Chernenko, V. S. (Engineer); Chernyak, N. I. (Engineer)

ORG: None

TITLE: Contact fatigue strength of ShKh15 bearing steel

SOURCE: Tekhnologiya i organizatsiya proizvodstva, no. 3, 1966, 63-66

TOPIC TAGS: fatigue test, fatigue strength, steel microstructure, x-ray analysis, BEARING STEEL / SHKH15 BEARING STEEL

ABSTRACT: The authors describe a study carried out at the Institute of Mechanics AN UkrSSR in cooperation with the First State Bearing Plant on the contact fatigue strength of ShKh15 bearing steel. The basic criterion in evaluating polishing conditions is taken as the physical state of the layer structure and depth of structural variation. Mechanical methods for testing contact fatigue strength and for measuring microhardness were used together with metallophysical methods and microstructural and x-ray structural analysis. Steel specimens used for these tests were heat treated after finish machining. The following heat treatment procedures were used: quenching at 850°C in 40-50°C oil, cold processing with cooling to -30°C and tempering at 150-160°C. These conditions give specimens with a hardness of HRC 62-64. After heat treatment the specimens were polished under various conditions. The specimens were divided into three groups according to the amount of metal removed: 0.1 mm for the first group; 0.15 mm for the second and 0.25 mm for the third. Depth of structural

UDC: 620.17:669.14

Card 1/2

L 06369-67

ACC NR: AF6027489

variation after polishing for the various groups is the following: 10-30 μ for the first group, 150-170 μ for the second and 220-250 μ for the third. Microstructural analysis for the first group shows that structural variation is not significant. The microhardness of these specimens is 950-1000 kg/mm². X-ray analysis for this group of specimens shows that variations due to polishing and honing are localized in a layer 10-30 μ thick. Slight deformation and elongation of the crystal lattice of the α -phase is observed in this layer. Depth of variation for the second group of specimens is 150-170 μ . This is substantiated by microhardness measurement data and microstructural and x-ray analysis. Depth of variation for the third group reaches 250 μ , these variations being similar to those of the second group. The unetched surfaces of the specimens in the first and second groups examined under an electron microscope show scaly tearing and deep scratches caused by polishing. After etching, secondary solid solutions are observed on individual surfaces oriented in the direction of polishing. A graph is given showing the contact fatigue strength of all three groups. The results show that contact fatigue limit for the second and third groups is identical (150-160 kg/mm²), differing from the first group where maximum contact strength is 200 kg/mm². Pit depth for the first group under staining does not exceed 300 μ , reaching 600-700 μ for the second and third groups. All groups show large-scale microfocal scaling after testing observed on the electron microscope. The authors recommend that polishing procedures be selected which have the minimum effect on the structural variation of the surface layer of ShKh15 steel. Orig. art. has: 4 figures.

SUB CODE: 11/ SUBM DATE: None

Card 2/2 *HH*

CHERNENKO, V.S.

Sterile cover for an interpolar electromagnet. Voen.-med. zhur.
no.9:63-64 S '55. (MLRA 9:9)

(ELECTROMAGNETISM IN MEDICINE)

GROZIN, B.D. [Hrozin, B.D.] [deceased]; PANCHENKO, N.P. [Panchenko, M.P.];
SEMIROG-ORLIK, V.N. [Semyroh-Orlyk, V.M.]; CHEFENKO, V.S.

Effect of the mass of the manufactured object on the physical
state of the surface layers of the metal in repeated grinding.
Dop. AN URSR no. 6:769-773 '63 (MIRA 17:7)

1. Institut mekhaniki AN UkrSSR. 2. Chlen-korrespondent AN UkrSSR
(for Grozin).

CHERNENKO, V.S.

~~Effect of tempering on the structure of steel following electron~~
beam heating. Dop. AN URSR no.11:1486-1489 '63. (MIRA 17:12)

1. Institut mekhaniki AN UkrSSR.

ACCESSION NR: AP4042824

S/0021/64/000/007/0919/0922

AUTHOR: Chernenko, V. S.; Ostrovs'ka, V. P. (Ostrovskaya, V. P.).

TITLE: The role of the initial structure in the electron-beam heating of steel

SOURCE: AN UkrSSR. Dopovidi, no. 7, 1964, 919-922

TOPIC TAGS: ball bearing steel, ball bearing ShKh15 steel, steel phase composition, steel initial structure, electron beam heating, heated steel phase composition, heated steel structure

ABSTRACT: The role of the initial structure in the formation, composition, and structure of the phases in electron-beam-heated, ball bearing ShKh15 steel was investigated. Steel specimens with initial granular pearlite, troostite, or sorbite structures and structures consisting of martensite, residual austenite, and carbides, or of tempered martensite, residual austenite, and carbides were obtained by hardening or by hardening and subsequent tempering at 200, 400, or 600C. Three distinct layers were observed in the electron-beam-

Card 1/3

ACCESSION NR: AP4042824

heated hardened steel. The upper layer had a coarse-grained, martensitic-austenitic microstructure with an undeterminable amount of residual austenite and no carbides; this layer had a microhardness of 700—750kg/mm². The microstructure of the second layer, at a depth of 550—600μ from the surface, consisted of large clusters of fine-grained martensite and residual austenite, the latter amounting to 55—60% of the total volume. Depending on the location, the microhardness varied from 550 to 750kg/mm². The third layer, 650—950μ from the surface, contained a large amount of dispersed carbides (an indication that the layer temperature did not exceed the A_{cm} point). The presence of martensite and residual austenite, whose amount decreased from 40—45 to 20—25% with increased depth, showed that the layer was heated above the A_{c1} point. The next (tempered) zone had a microhardness of about 500kg/mm², which indicated the presence of a dispersed ferrite-carbide mixture of the troostite type. Similar changes observed in the electron-beam-heated zones of tempered steel specimens showed that the initial structure plays no role in changes in the microstructure and phase composition of steel heated by an electron beam. The initial structure of the steel or, in other words, the tempering temperature noticeably,

Card 2/3

ACCESSION NR: AP4042824

affected the depth and the width of the electron-beam-heated zone, which was smallest in the quenched steel and largest in the annealed. Orig. art. has 4 figures.

ASSOCIATION: Institut mekhaniki, AN UkrSSR (Institute of Mechanics, AN Ukr SSR)

SUBMITTED: 30Sep63

ATD PRESS:3091

ENCL: 00

SUB CODE: MM, NP

NO REF SOV: 009

OTHER: 000

Card 3/3

CERNENKO, E. [Chernenko, Ye.], docent

Some problems related to the organization of pomicultural experimental works on the school plots. Natura Biologie 14 no.2:61-73 Mr-Apr '62.

1. Catedra de botanica de la Institutul pedagogic "I.V.Michurin [Michurin], " U.R.S.S.

CHERNENKO, Ye. A.

BELYAYEV, P.P., kandidat khimicheskikh nauk; CHERNENKO, Ye. A., mladshiy nauchnyy sotrudnik; FEDOROVA, M.P., mladshiy nauchnyy sotrudnik.

Tin plating in a sulfate electrolyte. Sbor. st. NIIKHIMMASH no. 15:74 (MIRA 10:1)
90 '54.

(Tin plating)

LEYTES, Z.M., kand. tekhn. nauk; SYSOYEVA, V.A., kand. tekhn. nauk;
CHERNENKO, Ye.B., inzh.

Cost parameters of underground transportation in mines working
steeply pitching seams. Nauch. soob. IGD 26:21-32 '65.
(MIRA 18:9)

USSR/Weeds and Weed Control

N

Abs Jour : Ref Zhur - Biol., No 10, 1958, No 44439

Author : Chernenko Ye.G., Pustovit L.V., Vinnikova T.T., Garayeva A.A.
Inst : Stavropol Agricultural Institute
Title : The Number and Botanical Composition of Weeds Which Choke
up the Land Used in Crop Rotation by Brigade No 3, Stalin
Kolkhoz in the City of Stavropol'.

Orig Pub : Sb. nauchno-issled. rabot stud. Stavropol'sk. s.-kh. in-t,
1956, vyp. 4, 56-58

Abstract : No abstract

Card : 1/1

CHERNENKO, Ye. I.

TARASOV, Yu. K. i CHERNENKO, Ye. I.
34164. Opyt lecheniya dlitel'nym snom yazvennykh bol'nykh. V sb: Problemy
Kortiko-vistseral'noy patologii. M., 1949, s. 355-59

SO: Knizhnaya Letopis' No 6, 1955

CHERNENKO, E. I.

1663. The Treatment of Peptic Ulcer by Prolonged Interrupted Narcosis. (Лечение язвенной болезни клипальным прерывистым сном)
E. I. CHERNENKO. Клиническая Медицина [Klin. Med., Mosk.] 27, No. 9, 69-72, Sept., 1949.

During 1946, 47 patients with peptic ulcer (45 men and 2 women) received 52 courses of prolonged, interrupted sleep treatment at the Botkin Hospital, Leningrad. In 5 cases the treatment was repeated 4 months to 2 years after the first course. Nine patients were 20 years old, eight 21 to 30, twenty-two 31 to 40, and eight 41 to 50. The history of the condition covered periods of from 1 year to 15 years. In 32 cases there was one duodenal ulcer, in 10 one gastric ulcer, in 3 two duodenal ulcers, in 3 two gastric ulcers, and in 3 both duodenal and gastric ulcers. Most patients had had seasonal exacerbations of their symptoms from 5 to 20 times. Clinically the most important symptom was pain; hypersecretion

and hyperacidity were combined with a profound emotional instability. In a 10- or 12-day course 13 to 25 g. of "sodium amyral" was given (3% solution, 0.2 to 0.6 g. three times daily rectally). Sleep lasted for about 12 to 21 hours.

During treatment 4 stages were observed. (1) First 3 days; sleep lasted for 18 to 22 hours, and on awakening there was euphoria and excellent appetite. (2) 4th to 7th day; sleep was lighter, with some pain and some toxic symptoms. (3) 8th to 12th day: deep sleep, no pain, appetite good. (4) For 2 to 3 days after treatment there was general weakness, depression, and loss of appetite. During sleep evacuation of the stomach was more rapid (15 minutes), and free and combined acidity were low. After treatment the pylorus appeared to be hypertonic for a short time. Potassium, calcium, and sugar content of blood were normal after successful treatment. Of 47 patients 42 were free of clinical and radiological symptoms after treatment, and 5 were free of clinical symptoms but the ulcer remained unchanged. All patients whose treatment was unsuccessful were 40 to 47 years old and had had symptoms for from 3 to 15 years. Relapse occurred in 13 cases; in 5 a second course was tried with good immediate results. *N. Chatelein*

Abstracts of World Medicine Vol 7 1950

CHERNENKO, Ye.I. (Moskva)

Sleep and its therapeutic importance. Med.sestra 15 no.6:6-9 Je '56.
(SLEEP--THERAPEUTIC USE) (MIRA 9:9)

POLOSIN, I.A.; CHERNENKO, Ye.I.; AFONIN, K.B.

Heating of truck engines with infrared burners. Stroi.truboprov.
9 no.11:17-20 N '64. (MIRA 18:2)

1. Yuzhgiprogaz, Donetsk.

CHERNENKO, Ye.S., kand.biologicheskikh nauk

In Czechoslovakian schools. Biol. v shkole no.3:62-64 My-Je '60.
(MIRA 13:7)

1. Michurinskiy pedagogicheskiy institut.
(Czechoslovakia--Vocational education)

CHERNENKO, Ye. S.

Parks in Czechoslovakia. Priroda no.6:53-55 Je '60.
(MIRA 13:6)
(Czechoslovakia--Parks)

CHERNENKO, Ye. S.

Characteristics of growth and flowering of apple trees produced
from crown and root tissues. Dokl. AN SSSR 156 no. 1:218-221
My '64. (MIRA 17:5)

1. Michurinskiy gosudarstvennyy pedagogicheskiy institut.
Predstavleno akademikom A. L. Kursanovym.

1ST AND 2ND ORDERS		3RD AND 4TH ORDERS	
CHERNEJKO, Ye. S.		11D	
PROCESSES AND PROPERTIES INDEX			
The changes in growth symptoms of apple varieties of different maturation time and time of coming into production. Ye. S. Chernenko. <i>Doklady Vsesoyuz. Akad. Sel'sko-Khoz. Nauk im. V. I. Lenina</i> 13, No 5, 10-27 (1948).--The problem is to find indices in the early stages of the growth of the apple tree as to their seasonal earliness and time of bearing. The early varieties have a higher saccharase activity just before the fall season sets in than the late varieties have. In the early bearing varieties the saccharase activity is higher before the processes of death at the end of the season set in. The process of aging in the early varieties comes on fast. The catalase activity is the reverse of that of the saccharase in the resp. types of trees. No definite correlation was found in the chlorophyll content of the early and late varieties, but the early varieties begin to show a decrease towards the end of the season much earlier than the late varieties. J. S. Ioffe			
ASA-SLA METALLURGICAL LITERATURE CLASSIFICATION			
SUBJECT INDEX		AUTHOR INDEX	
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100		1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100	

CHERNENKO, Ye. S.

CA

Chlorophyll content of leaves of apple and cabbage varieties with different maturation rates. Ye. S. Chernenko. *Doklady Akad. Nauk S.S.S.R.* 73, 401-4 (1950).
The summer varieties of apple leaves have lower amts. of chlorophyll and it is destroyed earlier in the fall than in plants having later maturation date (winter plants); the results are most striking when regarded in terms of leaf area. The results were indeterminate in warmer climate (Southern USSR). In cabbage either cool or warm climate gave good correlation of chlorophyll with maturation period.
G. M. Kosolapoff

CHERNENKO, Ye. S.

"Effect of the Stock on the Modification of Morphological and Physiological Characteristics of the Pear-Apple Hybrid," Dokl. AN SSSR, 85, No.1, 1952

CHERNENKO, Ye.S.

Apetalous apple tree. Priroda 42 no.12:105-108 D '53.

(MLRA 6:11)

1. Michurinskiy pedagogicheskiy Institut.

(Apple)

CHERNENKO, S.F.; CHERNENKO, Ye.S.

Methods of obtaining hybrids of the pear and apple. Izv. AN SSSR.
Ser. biol. no. 4:14-32 J1-Ag'55. (MIRA 8:10)

1. Tsentral'naya geneticheskaya laboratoriya imeni I.V. Michurina,
Michurinsk
(Hybridization, Vegetable) (Apple) (Pear)

CHERNENKO, Ye.S.

Botanical Garden of the Caroline University in Prague.
Bot.zhur. 45 no.6:929-930 Je '60. (MIRA 13:7)

1. Michurinskiy pedagogicheskiy institut.
(Prague--Botanical gardens)

CHERNENKO, Ye.S. (Michurinsk)

Victoria regia. Priroda 49 no.11:111 N '60.
(Czechoslovakia--Water lilies)

(MIRA 13:11)

CHERNENKO, Ye.S.

Biological properties of apples from cuttings of various
origin. Agrobiologia no.5:707-717 S-0 '61. (MIRA 14:10)

1. Pedagogicheskiy institut, g. Michurinsk.
(Apple) (Grafting)

CHERNENKO, Ye.S., kand.biol.nauk

Night and day flowers. Priroda 50 no. 2:105-106 F '61.
(MIRA 14:2)

1. Michurinskiy pedagogicheskiy institut.
(Flowers)

CHERNENKO, Ye.S., kand.biol.nauk (Michurinsk)

Plant surgery. Priroda 50 no.4:101-103 Ap '61. (MIRA 14:4)
(Grafting)

CHERNENKO, Ye.S., kand.biolog.nauk

New early-summer apple varieties. Priroda 50 no.8:126-127 Ag '61.
(MIRA 14:7)

1. Michurinskiy pedagogicheskiy institut.
(Apple--Varieties)

CHERNENKO, Ye .S., kand.biolog.nauk

July apples. Priroda 51 no.7:126-127 J1 '62.

(MIRA 15:9)

1. Michurinskiy pedagogicheskiy institut.
(Apple)

CHERNENKO, Ye.S.

Experiments with dwarf fruit plants. Biol. v shkole no.4:55-57
Jl-Ag '63. (MIRA 16:9)

1. Michurinskiy pedagogicheskiy institut.
(Dwarf fruit trees)

CHERNENKO, Ye.S.

Winter hardiness of apple trees grown from the tissues of
crown and root. Nauch. dokl. vys. shkoly; biol. nauki no.3:
190-196 '64 (MIRA 17:8)

1. Rekomendovana kafedroy botaniki Michurinskogo pedagogi-
cheskogo instituta.

~~CHERNOBYL~~

MOROZOVSKAYA, M.I.; DEMCHENKO, I.A.; TISHCHENKO, O.D.; GORELYSHEVA, I.I.;
YEVLAKHOVA, V.F.; NADTOCHKIY, S.S.; GAL'PERIN, L.Yu; BELYI, Ya.M.;
LAZEBNYY, N.V.; DEREVENKO, V.I.; SERVINENKO, G.A.; SHEVCHUK, M.K.;
D'YACHENKO, V.I.; AGAFONOV, N.I.; BESFAMIL'NAYA, P.S., CHERNENKO, Yu.L.

Preventive antimalaria measures for lumberjacks employed in clearing
the bed of the future Kakhovka Reservoir. Med.paraz. i paraz.bol.24
no.3:207-208 J1-S '55. (MLRA 8:12)

1. Iz Ukrainского nauchno-issledovatel'skogo instituta malyarii i
meditsinskoy parazitologii imeni prof. V. Ya. Rubashkina (dir.
instituta I.S.Demchenko) i Zaporozhskoy, Dnepropetrovskoy i
Khersonskoy oblastnykh protivomalyariynykh stantsiy.
(MALARIA, prevention and control,
in Russia, in forest workers)

MOROZOVSKAYA, M.I.; TISHCHENKO, O.D.; DEMCHENKO, I.A.; GORELYSHEVA, I.I.;
BEL'SKAYA, M.K.; YEVLAKHOVA, V.F.; AGAFONOV, I.N.; BESFAMIL'NAYA,
P.S.; CHERNENKO, Yu.P.

Antimalarial measures in the construction zone of the Kakhovka
Hydroelectric Power Station. Med.paraz.i paraz.bol. no.1:61-66
Ja-Mr '54. (MLRA 7:3)

1. Iz Ukrainського nauchno-issledovatel'skogo instituta malyarii i
meditsinskoj parazitologii im. professora V.Ya.Rubashkina (direk-
tor instituta I.V.Demchenko) i Khersonskoy oblastnoy protiv-
malyariynoy stantsii (zaveduyushchiy stantsiyey I.A.Agafonov).
(Kakhovka region--Malarial fever)
(Malarial fever--Kakhovka region)

CHERNENKO, Yu.Ya.

Boron mineralization in one of the regions in Siberia. Trudy
SNIIGGIMS no.35:182-189 '64. (MIRA 18:5)

CHERNENKO, Zh.S., Cand Tech Sci --(diss) "Investigation of the
filtration of the working liquids of airplane hydraulic systems,"
Kiev, 1960, 16 pp, 160 cop. (Kiev Institute of the Civil Air Fleet)
(KL, 45-60, 126)

BELIANIN, Petr Nikolayevich, inzh.; CHERNENKO, Zhan Sergeyevich,
kand. tekhn. nauk; SUTUGIN, G.S., kand. tekhn. nauk,
retsenzent; BALASHOV, V.S., inzh., red.; GRIGORASH, K.I.,
red.

[Aircraft filters and cleaners for hydraulic systems] Aviatsion-
nye fil'try i ochistiteli gidravlicheskikh sistem. Moskva, Ma-
shinostroenie, 1964. 293 p.
(MIRA 17:4)

1ST AND 2ND ORDERS																										2ND AND 4TH ORDERS																									
COMMON ELEMENTS																										COMMON VARIABLES																									
CHERNENKOV, A. D.																																																			
B-D																																																			
PROCESSES AND PROPERTIES INDEX																																																			
"Soil aeration and yield of sugar beets. A. D. Chernenkov. <i>Chemization Socialistic Agr. (U. S. S. R.)</i> 1938, No. 7-8, 140-41 (in English 154).—By following the oxidation-reduction potentials Ch. determines the state of aeration of the soil and its effect on the development of sugar beets. J. S. Joffe																																																			
ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION																																																			
FROM SWISS JOURN																										FROM ROMANIA																									
1ST AND 2ND ORDERS																										2ND AND 4TH ORDERS																									
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z																										A B C D E F G H I J K L M N O P Q R S T U V W X Y Z																									

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26																									
1ST AND 2ND ORDERS													3RD AND 4TH ORDERS												
CHERNENKOV, A. D. 20 15 The influence of boron and manganese on the limed soils of the Ussuri region in the Far East. A. D. Chernenkov and K. I. Arkhipova. <i>Bull. Far East. Branch Acad. Sci. U. S. S. R.</i> No. 20, 33-41 (in English 42) (1937).—Applications of B to the limed heavy clay podzols improved the yield of beets. Its influence is attributed to the destruction of anaerobic bacteria thereby decreasing the reducing reactions. Mn addns. did not influence the beets. I. S. Toffe																									
ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION																									
12041 80410V																									

CHERNENKOV, A. [D.]

"Autumn Sowing of Sugar Beets in the Nonchernozem Zone" Tr. from the Russian.
p. 884, (ZA SOCIALISTICKE ZEMEDELSTVI, Vol. 2, no. 8, August 1952, Praha,
Czechoslovakia).

SO: Monthly List of East European Accessions, LC, Vol. 2, No. 11, Nov. 1953, Uncl.

CHERNENKOV, A. D.

"Sowing Sugar Beets in Ridge Rows," Sov. agron., 10, No.4, pp 49-54, 1952

CHERNENKOV, A. D.; ZHDANOV, B. A.

Beets and Beet Sugar

Mechanized ridge cultivation of sugar beets in the non-chernozem zone.
Sakh. prom. 27, No. 3, 1953.

9. Monthly List of Russian Accessions, Library of Congress, June 1953, Uncl.

CHERNENKOV, A. D.; BOROVIKOV, V. T.

"System of Fertilization in Beet Crop Rotation."

Orig Pub : Batv. PSR zinatnu Akad. Vestis, Izv, AN LatvSSR. 1956, No 8, 59-66.

Abstract: On the Mezhotnen beet-experimental-plant-breeding station of the Latvian SSR, an experiment was carried out in a nine-field crop rotation on sod-carbonate loamy soil, on a drained area of 27 ha., to study a system of fertilization in beet-crop rotation. The beet was cultivated according to the turnover of the grass layers of the third year of use. The planting is comb-shaped. In the spring, at the cutting of the combs, N 120, p 120. K 120 were applied; in the rows, at the sowing, P 20. and, in the fodder, N 30, P 30. K 30. The manure saturation of rotated crops by 20, 40, 80 and 120 ton/ha. of manure and NPK at 150 kg/ha. and on the beet. The addition of 15 t./ha. of liquid dung increased the yield of the sugar beet to 555 c/ha.; of hay of perennial grasses 153 c/ha. The after-effect of the manure in crop rotation exceeded its direct action.

CHERNENKOV, A. D.

Over-all mechanization of sugar-beet growing in a humid climate.
Sakh.prom.30 no.2:63-66 F '56. (MLRA 9:7)

1.Vsesoyuznyy institut mekhanizatsii.
(Sugar beets)

CHERNENKOV, A.D.; SEMYKIN, K.I.; TOMASHEVSKIY, T.S.

Using tractor-mounted machines and improving technical methods
of sugar beet cultivation in the Baltic Sea region. Sakh. prom.
31 no.5:63-67 My. 1957. (MLRA 10:6)

1. Vsesoyuznyy institut mekhanizatsii (for Chernenkov). 2. Me-
zhotnenskaya opytno-selektsionnaya stantsiya (for Semykin and
Tomashevskiy).

(Baltic Sea region--Sugar beets)

DALIN, A.D., doktor tekhn.nauk; ~~CHERNENKOV, A.D.~~, kand.sel'skokhoz.nauk;
OS'MAKOV, I.G., kand.sel'skokhoz.nauk; KARAVYANSKIY, N.S.

New methods of cultivating soil for corn and root crops in the
non-Chernozem zone. Dokl.Akad.sel'khoz. 24 no.8:45-48
'59. (MIRA 12:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut kormov imeni
V.R.Vil'yamsa. Predstavlena akademikom A.N.Karpenko.
(Tillage) (Corn(Maize)) (Root crops)

CHERNENKOV, A.D., kand.sel'skokhoz.nauk; POPOV, G.F., inzh.

Rotary cultivator. Trakt.i sel'khoz mash. 30 no.10:29-30 0
'60. (MIRA 13:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut kormov im.
V.R.Vil'yamsa [VIK].
(Cultivators)

OS'MAKOV, I.G., kand. sel'khoz. nauk; CHERNENKOV, A.D., kand. sel'khoz.
nauk; ZAGORSKIY, G., red.; SHLYK, M., tekhn. red.

[Forage cabbage] Kormovaya kapusta. Moskva, Mosk. rabochii, 1961.
17 p. (MIRA 14:7)

(Cabbage)

OS'MAKOV, I.G., kand. sel'khoz. nauk; CHERNENKOV, A.D., kand. sel'khoz. nauk;
POLYAKOVA, V., red.; SHLYK, M., tekhn. red.

[Sugar beet as feed] Sakharnaia svekla na kormovye tseli. Moskva,
Mosk. rabochii, 1961. 27 p. (MIRA 14:7)
(Sugar beets)

CHERNENKOV, D. P.

BTR

19

462° Preliminary Draining of Peat Beds. (In Russian.) D. P. Chernenkov. *Torfanata Promyshlennost*, v. 28, Mar. 1951, p. 21-22.

Special power shovels used to dig drainage ditches when opening up a new peat deposit are described and illustrated. Drainage system is diagrammed.

CHERNENKOV, D. P.

"Regulating the Stream and Main Canal Layout in Simple Peat Excavations,"
Torf. prom., 29, No.6, 1952

CHERNENKOV, D.P.

BAUSIN, A.F.; SOKOLOV, A.A.; ANTONOV, V.Ya.; KURDYUMOV, S.V.; BEL'KEVICH, P.I.; SAVINYKH, A.I.; KARAKIN, F.F.; SOLOPOV, S.G.; YEFIMOV, V.S.; YARIVITSIN, V.I.; RABKIN, B.A.; BABARIN, A.F.; MATVEYEV, L.M.; FUNIKOV, S.A.; CHERNENKOV, D.P.; BULAYEVSKIY, N.V.; kandidat tekhnicheskikh nauk; SHINKARIN, K.K.; TSUPROV, S.A.; GINZBURG, L.N.; VASIL'YEV, Yu.K.

Scientific and technical conference on the work of the peat industry of the Ministry of Electric Power Stations. Torf.prom. 32 no.2:1-20 '55.
(MLRA 8:5)

1. Zamestitel' ministra elektrostantsiy (for Bausin). 2. Zamestitel' direktora VNIITP (for Sokolov). 3. Zamestitel' direktora MTI (for Antonov). 4. Zamestitel' direktor "Khranesttopprom" (for Kurdyumov). 5. Direktor Instituta torfa AN BSSR (for Bel'kevich). 6. Nachal'nik Glavenergozapchasti MES (for Savinykh). 7. Glavnyy inzhener Ivanovskogo torfotresta (for Karakin). 8. Zamestitel' direktora MTI (for Selepev). 9. Upravlyayushchiy Shaturskogo torfotresta (for Yefimov). 10. Glavnyy mekhanik Inyavosvskogo torfotresta (for Yarovitsin). 11. Glavnyy mekhanik Leningradskogo torfotresta (for Rabkin). 12. Glavnyy inzhener Ozeretsko-Neplyuyevskogo torfopredpriyatiya (for Babarin). 13. Glavnyy inzhener Gor'kovskogo torfotresta (for Matveyev). 14. Zamestitel' laboratorii VNIITP (for Funikov). 15. Glavnyy inzhener torfotresta Lestorfestroy (for Chernenkov).

(Continued on next card)

CHERNENKOV, D.P., inzh.

Some problems in the complex mechanization of milled peat field
preparation. Torf. prom. no.1:19-22 '58. (MIRA 12:12)

1. Lenterfostroy.

(Leningrad Province--Peat industry)

CHERNENKOV, D.P., inzh.

Composite crews for the preparation of milled peat fields. Torf.
prom. 35 no.8:7-9 '58. (MIRA 11:12)

1. Lentorfostroy.

(Peat industry--Equipment and supplies)

CHERNENKOV, I.I., Cand Tech Sci — (diss) "Extraction of ^{technical} ~~engineer-~~
^{gases} ~~ing~~ gas of given composition by means of ^{the} ~~oxygen~~ oxidation of me-
^{by oxygen} ~~thane~~ ^{products of} with subsequent reduction of the oxidation ~~products~~ ^{to} with
^{means of} ~~the~~ fuel carbon." Mos, 1959. 20 pp (Acad Sci USSR. Inst of
^{ble} ~~Combustion~~ Minerals). 150 copies (KL, 38-59, 118)

56

CHERNENKOV, I. I.

PHASE I BOOK EXPLANATION

80/3731

Abadent's mark 8888. Institut gosyubkh tekhnosykh

Gasification i goraniye topliv (Fuel Gasification and Combustion) Moscow, Izd-vo AN SSSR, 1959. 227 p. (Series: Isti Trudy, Vol. 11) Arzeta slip inserted. 1,800 copies printed.

Ed.: E. V. Lavrov; Ed. of Publishing House: V. V. Pokrovskiy; Tech. Ed.: I. B. Borobina.

PURPOSE: This collection of articles is intended for scientific research workers and engineers studying combustion processes and solid fuel gasification.

CONTENTS: This collection concerns the theoretical and experimental study of the mechanism of chemical reactions occurring in the gas generating process and its results of the isotopic method of studying the gas generating process and its reactions, and the reaction of carbon monoxide. The kinetic data are analyzed and the pilot plants used in this study are described. The kinetic data of coal oxidation, methane dissociation and conversion are discussed. The equilibrium constants given in tables. The processes of methane oxidation by oxygen and synthesis-gas production by oxidizing natural gas with the subsequent reduction of oxidation products by carbon are analyzed as is the effect of an excess amount of air on the burning process of powdered solid fuel. The utilization of heavy petroleum residues and tar for combustion and gasification purposes is also discussed along with the principles of fluidization. Analysis, routine control and intensification of physical and chemical processes by means of ultrasonic vibrations are also covered. No personalities are mentioned. References accompany all but the first article.

TABLE OF CONTENTS:

Lavrov, E.V., V.V. Korobov, V.A. Filimonov, and I.I. Chernenkov. Thermodynamics of Gasification Reactions	23
Galushko, P.M., and B.V. Kuznetsov. Kinetics of the Reaction of Carbon With Carbon Monoxide and Steam	39
Chernenkov, I.I. Thermodynamic Analysis of Methane Oxidation Induced by Oxygen With Subsequent Reduction of Oxidation Products by the Carbon in Fuel	46
Lavrov, E.V., I.I. Chernenkov, and V.V. Korobov. Experimental Study of the Process of Producing Synthesis Gas by Natural Gas Oxidation Induced by Oxygen With Subsequent Reduction of Oxidation Products by the Carbon in Fuel	56
Al'tshuler, V.B., and G.A. Shafir. Thermodynamic Study of the Process of Methane Conversion Achieved Under High Pressure by Steam and Carbon Dioxide	65
Lavrov, E.V., and E.B. Trifonova. Study of the Methane Conversion Reaction Induced by Steam in Conjunction With the Background Gasification of Coal	73
Pliginskii, A.P. Experimental Study of the Effect of Excessive Air on the Process of Combustion of a Powdered Solid Fuel Stream	82
Rekhanov, I.Y., E.M. Ruriev, V.V. Korobov, E.V. Lavrov, and A.M. Nestin. Organic Synthesis From Carbon Monoxide and Steam	91
Lavrov, E.V., and M.A. Buzarskaya. Organic Synthesis From Carbon Monoxide and Steam	100
Gavrilova, A.I. Study of Kinetics of the Reduction of Iron Oxide by Carbon	105
Belavskii, O.N. Experimental Study of Combustion and Heat Exchange Processes During Burning of a Liquid Fuel Spray in a Cylindrical Combustion Chamber Under Pressure	113
Drumov, B. M. Stoichiometric Analysis of Chemical Reactions of the Combustion Process and of Carbon Gasification	127
Vysotskiy, G.Ye., and Ya.I. Chernenkov. Analysis of the Process of Burning Coal in a Layer by the Method of Similitude	133

CHEMEN KOV, L.L.

21(1),1(2)
AUTHORS:

Lavrov, N. V., Doctor of Technical Sciences, Zakharov, V. A., Candidate of Technical Sciences, Miroshchichenko, V. B., Engineer, Perepilkin, A. L., Candidate of Technical Sciences, Plushin, A. I., Engineer, Chernenkov, I. I., Engineer

Use of Air Enriched With Oxygen in Partial Carbonization of Coal (Primeneniye obogatshennogo kislorodom vosdukh pri polukokovanii uгля)

Kislorod, 1959, Nr. 2, pp. 1-9 (USSR)

ABSTRACT:

An air-blowing engine has hitherto been applied in multistage shaft furnaces, in which general use is made in partial carbonization of coal. In addition to semicokes, semicoke gas was produced which contained a large quantity of nitrogen. Thus this gas is very unfavorable for further use for heating and technical purposes. Consequently, the authors made an experiment with industrial furnaces in which the gas used to use air enriched with oxygen. As a result, the semicoke gas was considerably improved and the coking process was intensified. A diagram of a multistage furnace for partial carbonization of coal is shown in figure 1, and its mechanism is

Card 1/3

described. For the purpose of investigating the dependence of the gas yield on temperature during the coking process the authors made laboratory experiments with Cherenkhovo coal. Data on the composition and yield of the gas are listed in table 1. The investigations were conducted by Engineer L. P. Oryanikov, with the assistance of Engineer V. V. Shiktorov, Engineer A. I. Gorokhova, and Engineer K. A. Bogachev. In addition, the influence exercised by various oxygen contents on the composition and calorific value of the gas obtained was investigated. The following data were obtained: In addition to semicokes and tar, gas with a calorific value of 2,200 kcal/m³ is obtained during the partial carbonization of coal in multistage shaft furnaces, using an air-blowing engine with an oxygen content of up to 30 and 40%. Gas is produced by oxygen enrichment of 40% which affords further treatment can be used for synthesizing ammonia. With an enrichment of 50% and more a gas results which has a calorific value of 4,000 kcal/m³. Price cost per calorie of the gas obtained does not differ greatly from that of

Card 2/3

natural gas (for conditions prevailing in East Siberia) (table 4). The oxygen consumption does not exceed 40-50% with respect to the amount required by direct gasification of coal by means of oxygen (producer gas) (table 5). Table 2 and figure 2-7 (diagram) contain the chemical characteristics of oxygen and air, composition, calorific value and various additions of oxygen. There are 7 figures, 4 tables, and 14 Soviet references.

Card 3/3

AUTHOR: Chernenkov, I.I. (Moscow) SOV/180-59-2-29/34
TITLE: Production of Synthesis-Gas by Oxidation of Methane by
Oxygen with Subsequent Reduction of the Oxidation Products
by the Carbon of the Fuel (Polucheniye sintez-gaza
okisleniyem metana kislorodom s posleduyushchim
vosstanovleniyem produktov okisleniya uglerodom topliva)
PERIODICAL: Izvestiya akademii nauk SSSR, Otdeleniye tekhnicheskikh
nauk, Metallurgiya i toplivo, 1959, Nr 2, pp 155-160 (USSR)
ABSTRACT: The author points out that different carbon-monoxide :
hydrogen ratios are required for different syntheses.
The partial-oxidation method, on which most new natural-
gas using plants are based, gives an almost constant
ratio, and the composition has to be adjusted separately.
The author gives the results of his thermodynamic
calculations made by methods described in the literature
(Refs 2-6), values of thermodynamic parameters for
reaction products calculated at IGI AN SSSR from the
latest constants, and heats of reaction calculated from
U.S. Bureau of Standards data. They relate to an
adiabatic process in which the methane-oxidation products
react with carbon. Fig 1 shows the dependence of the

Card 1/3

SOV/180-59-2-29/34

Production of Synthesis-Gas by Oxidation of Methane by Oxygen with Subsequent Reduction of the Oxidation Products by the Carbon of the Fuel

methane-oxidation equilibrium gas composition on the $O_2 : CH_4$ ratio and Fig 2 the dependence of the gas composition in equilibrium with carbon (at a temperature depending on the $O_2 : CH_4$ ratio). From Fig 2 it follows that wide variation in the $CO : H_2$ ratio is possible by adjustment of the $O_2 : CH_4$ ratio. The heat effect of the process also depends (Fig 3) on that ratio. A laboratory installation (Fig 4) was used for experiments on the proposed process. It consisted of a 90-mm long, 400-mm diameter reactor of type EYa IT steel connected directly to a bunker for the solid fuel above it, a burner of special design (Fig 5) feeding into a combustion chamber (34 x 47 mm and 120 mm long) of silicon carbide which was heated near the bottom of the reactor and surrounded by solid fuel (thus avoiding heat waste); appropriate gas supply systems, sampling points and instrumentation. Gas samples and temperatures were taken within the solid-fuel layer through which the combustion gases passed upwards. Fig 6 shows the yields of the various exit-gas

Card 2/3

SOV/180-59-2-29/34

Production of Synthesis-Gas by Oxidation of Methane by Oxygen with Subsequent Reduction of the Oxidation Products by the Carbon of the Fuel

components in mols/mol of methane as functions of the $O_2 : CH_4$ ratio. The $CO : H_2$ ratio was found to be directly related to the initial $O_2 : CH_4$ ratio. Fig 7 shows the dependence of $(CO+H_2)$ in mols per mol of initial oxygen (curve 2) on the $O_2 : CH_4$ ratio. Curve 1 continues to rise throughout the range of $0.8 - 1.6 = O_2 : CH_4$ while curve 2 reaches a maximum at a ratio value of about 1.2. The results obtained when the solid fuel consisted of coke (11.8% ash, 2.7% volatile matter) crushed to 3-5 mm, are tabulated.

Card 3/3 There are 7 figures, 1 table and 7 references, 5 of which are Soviet and 2 English.

SUBMITTED: July 22, 1958

BOGDANOV, I.F.; LAVROV, N.V.; MAKAROV, I.A.; PINSKER, A.Ye.; CHERNENKOV, I.I.

Possibility of obtaining synthesis gas in semicoke-
producing ovens using an air blast enriched with oxygen.
Gas, prom, 4 no.11;18-22 '59. (MIRA 13:2)
(Gas manufacture and works)

LAVROV, N.V.; KOROBOV, V.V.; FILIPPOVA, V.I.; CHERNENKOV, I.I.

Thermodynamics of gasification processes. Trudy IGI 11:23-29
Mr '60. (MIRA 13:6)
(Coal--Gasification)

CHERNENKOV, I.I.

Thermodynamic analysis of the oxidation of methane by oxygen with
subsequent reduction of the oxidation products by the fuel carbon.
Trudy IGI 11:46-55 '59. (MIRA 13:6)
(Methane) (Oxidation--Reduction reaction) (Carbon)

LAVROV, N.V.; CHERNENKOV, I.I.; KOROBOV, V.V.

Experimental study of the process employed for the production of
synthesis gas involving the oxidation of natural gas by oxygen and
a subsequent reduction of the oxidation products by the fuel carbon.
Trudy IGI 11:56-65 '59. (MIRA 13:6)
(Gas, Natural) (Oxidation-~~Reduction reaction~~) (Carbon)

5.3300

26533

S/167/60/000/006/003/003

A104/A133

AUTHORS: Lavrov, N. V., Academician of the Academy of Sciences UzSSR,
Korobov, V. V., and Chernenkov, I. I.

TITLE: Method of thermodynamic computation of the pyrolysis of light
hydrocarbons

PERIODICAL: Akademiya nauk UzSSR. Izvestiya. Seriya tekhnicheskikh nauk, no. 6
1960, 67-76

TEXT: The authors review the necessity of increasing the resources of
unsaturated hydrocarbons (ethylene and propylene) by the method of oxidation
pyrolysis of saturated hydrocarbons. The oxidation pyrolysis was investigated
by Soviet and foreign scientists [Ref. 5: K. K. Dubravay and A. B. Sheyman, Oki-
slitel'nyy kreknig, (Oxidation Cracking) M.-L., ONTI, 1936; Ref. 6: M. Ya. Kogan,
and L. D. Balashova, Okislitel'noye degidrirovaniye etana, Otchet MITKhT im.
Lomonossova, M., (Oxidation Dehydration of Ethane), 1947; Ref. 7: P. P. Karzhev
and G. A. Baluyeva, Khimicheskaya pererabotka neftyanykh uglevodorodov (Chemical
Processing of Petroleum Hydrocarbons) M., AN SSSR, 1956; Ref. 8: Problemy okis-
leniya uglevodorodov (The Problem of Oxidation of Hydrocarbons) Institut nefti
Card 1/8

26533

S/167/60/000/006/003/003

A104/A133

Method of thermodynamic computation of ...

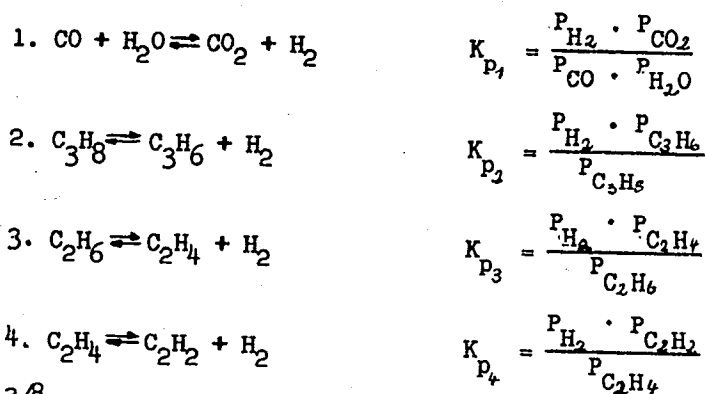
AN SSSR, M., AN SSSR, 1954 and Ref. 9: Deansly, Watkins, Chem. Eng. Progr., 47, No.3, 134, 1951]. The first investigations on this problem were performed by K. K. Dubravay (Ref. 5). Oxidation pyrolysis experiments were performed at the ONTI, MITKHT im. Lomonosov and by the Academy of Sciences USSR (References 5-8), whereas experiments of oxidation pyrolysis of ethane and propane performed at the IGI AS USSR were not satisfactory. As the pyrolysis is accompanied by a volume increase, the reduction in pressure should increase the amount of unsaturated hydrocarbons in the equivalent mixture. The reduction in pressure by addition of inert solvents (nitrogen, hydrogen, carbon dioxide, methane) is considered inexpedient and the introduction of water vapor into the reaction zone is recommended despite of contradictory data on its effect on the yield of unsaturated hydrocarbons and on coking. The purpose of this investigation is to establish the gas equilibrium of the pyrolysis C_2H_6 , C_3H_8 , C_4H_{10} at 700 - 1,500°K depending on variations over a range of oxygen and water vapor concentrations in the raw material. In view of the complexity of this problem all possible transformation of the raw material, e.g., oxygen and aromatic compounds, were investigated to determine the most advantageous reaction process. It was assumed that the equilibrium mixture of the pyrolysis C_2H_6 , C_3H_8 , C_4H_{10} contains C_2H_4 , C_3H_6 , C_2H_2 ,

Card 2/8

Method of thermodynamic computation of

26533
S/167/60/000/006/003/003
A104/A133

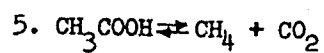
C_2H_6 , C_3H_8 , CH_4 , C_4H_{10} , C_4H_8 , C_4H_6 , H_2 , O_2 , CO , CO_2 , H_2O , CH_3 , $COOH$, CH_3CHO , C_6H_6 .
The required 17 unknown equilibric partial pressures are determined by 17 independent equations, 14 of which, representing the equilibrium constant of independent reactions according to Gibbs law, are:



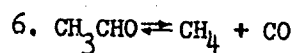
Card 3/8

Method of thermodynamic computation of

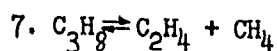
26533
S/167/60/000/006/003/003
A104/A133



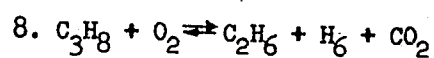
$$K_{P_5} = \frac{P_{\text{CO}_2} \cdot P_{\text{CH}_4}}{P_{\text{CH}_3\text{COOH}}}$$



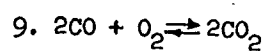
$$K_{P_6} = \frac{P_{\text{CO}} \cdot P_{\text{CH}_4}}{P_{\text{CH}_3\text{CHO}}}$$



$$K_{P_7} = \frac{P_{\text{CH}_4} \cdot P_{\text{C}_2\text{H}_4}}{P_{\text{C}_3\text{H}_8}}$$



$$K_{P_8} = \frac{P_{\text{C}_2\text{H}_6} \cdot P_{\text{H}_2} \cdot P_{\text{CO}_2}}{P_{\text{C}_3\text{H}_8} \cdot P_{\text{O}_2}}$$



$$K_{P_9} = \frac{P_{\text{CO}_2}^2}{P_{\text{CO}}^2 \cdot P_{\text{O}_2}}$$

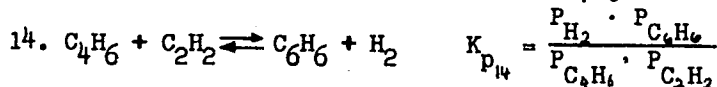
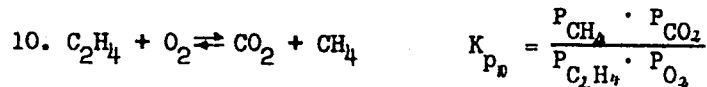
Card 4/8

26533

S/167/60/000/006/003/003

A104/A133

Method of thermodynamic computation of



Equations 15 and 16 represent the constancy of ratio - $\frac{C}{H_2}$ (15) and ratio $\frac{H_2}{0.5\text{O}_2}$ (16)

Card 5/8

Method of thermodynamic computation of

26533
S/167/60/000/006/003/003
A104/A133

in the raw material and in derived equilibrium gas. Values of both ratios are given for ethane, propane and butane. The equality equation of the sum of partial component pressures to the total pressure in system is $\sum P_i = P_{tot}$ (17)

where $m = \frac{H_2O}{C_n H_{2n+2}}$ = water vapor concentration in the initial mixture,

$n = \frac{O_2}{C_n H_{2n+2}}$ = hydrogen concentration in the initial mixture and P_{tot} = pressure

in the system equaling 1 atm. [Abstracter's note: subscript tot. (total) is a translation from the Russian *obshcheye*.] In view of the difficulty of solving equations (1) - (17) by conventional methods the use of a БСЭМ (BSEM) electronic computer is recommended. Most favourable thermodynamic values of substances participating in the reaction were achieved by extrapolation of available data on acetaldehyde and interpolation of acetic acid data at 1,000 - 1,500°C. All calculations were carried out according to equation

$$R \ln K_p = - \frac{\Delta H_0^\circ}{T} + \Delta \phi^x.$$

Values of ϕ^x potentials and ΔH_0° of substances participating in reactions 1 - 14
Card 6/8

Method of thermodynamic computation of

26533

S/167/60/000/006/003/003

A104/A133

were obtained from N. N. Lavrov, V. V. Korobov and V. J. Filipova [Ref. 21: Termodinamika reaktsiy gazifikatsii i sinteza is gazov (Thermodynamics of Gasification Reaction and of Gas Synthesis) M., AN SSSR, 1960. Calculations of the Φ^x acetaldehyde potential at 800 - 1,500°K was based on the initial constant of molecule described by K. S. Pitzner and W. J. Weltner [Ref. 23: Am. Chem. Soc. 71, 18, 2842, 1949] Acetaldehyde molecules have no symmetric elements, therefore their symmetric number is $\sigma = 1$ and all frequencies have nondegenerate characteristics. Fourteen equations were determined during the investigation of vibration spectra 525, 918, 1.114, 1.350, 1.370, 1.414, 1.740, 2.710, 2.915, 3.005, 764, 883, 1.440 and 2.976. The 15th equation corresponds to the delayed internal rotation of the CH_3 group around C-C. The height of the barrier decelerating the rotation of this group was determined as $\text{C}_2\text{H}_5\text{OH} = \text{CH}_3\text{CHO} + \text{H}_2$ according to data on the equilibrium of the dehydration reaction of ethyl alcohol and the thermal capacity of acetaldehyde steam [Ref. 27: C. F. Coleman and J.J. de Vries, Am Chem. Soc. 71, 18, 2839, 1949]. The assumed height of the barrier equals 1,000 cal/mol. The addition of two equations, obtained by the calculation of progressive and rotation components, provides $\Phi^x_{r+p} = 5.7263 + 18.30224 \lg T$. The free internal rotation component is $\Phi^x_{f.i.p.} = 2.2878 \lg T - 3.4183$. [Abstracter's note: sub-

Card 7/8

Method of thermodynamic computation of

26533

S/167/60/000/006/003/003

A104/A133

scripts r (rotation), p (progressive) and f.i.n (free internal rotation) are translations from the Russian *bp* (vrashcheniye), *nocr* (postupatel'naya) and *CB.BHBP* (svobodnoye vnutrennoye vrashcheniye).] To determine the decelerated internal rotation component it is necessary to calculate the value:

$$Q_{f.i.r.} = \frac{2.815}{3} (I_{red} \cdot 10^{38} T)^{1/2} = 1.8053 \left(\frac{T}{100} \right)^{1/2} \cdot 10^{38},$$

where T = 800, 1,000, 1,100, 1,200, 1,300, 1,400, 1,500 and $Q_{f.i.r.} = 5.106,$

5.709, 5.987, 6.254, 6.509, 6.755, 6.992. Equations and thermodynamic values quoted in this article permit the application of latest computation methods and an extensive analysis of components over extensive temperature, pressure and concentration ranges. There are 3 tables and 28 references: 18 Soviet-bloc and 10 non-Soviet-bloc. The references to the most recent English language publications read as follows: Deansly, Watkins, Chem. Eng. Progr. 47, N 3, 134, 1951; Carpenter R. A., Fonler, F. C. Petr. Ref. 31, N 4, 148, 1952; Sherwood, P. W. Petr. Ref. 30, N 11, 157, 1951; Weltner, W. J. Am. Chem. Soc. 77, 3941, 1955.

ASSOCIATION: Institut Goryuchikh iskopyemykh AN SSSR (Institut of Combustible Minerals, Academy of Sciences, USSR)

SUBMITTED: March 18, 1960

Card 8/8

CHERNENKOV, I.I.

Preparation of synthesis gas with a selected ratio of carbon
monoxide to hydrogen. Trudy IGI 12:177-180 '61. (MIRA 14:3)
(Carbon monoxide) (Hydrogen) (Hydrocarbons)

MARIN, A.R.; CHERNENKOV, V.M.

Injectivity surveys of the injection wells of the Serafimovskaya
group of oil fields. Nefteprom. dalc no.2:17-18 '65. (MIRA 18:5)

1. Neftepromyslovoye upravleniye "Oktysbr' skneft'".

CHERNENKOVA, M.P. (Donetsk 3, Makeyevskoye shosse, obshchezhitnye , sektsiya
23)

Abstracts. Ortop., travm. i protez. 26 no.3:71 Mr '65. (MIRA 18:7)

1. Iz kafedry biokhimii Donetskogo meditsinskogo instituta imeni
Gor'kogo (rektor -- prof. A.M.Ganichkin).

CHERNENKOVA, N.A.

ROZOVA, Z.A.; ~~CHERNENKOVA, N.A.~~; REZNIKOVA, O.Yu.; BOBYREVA, N.D.;
~~KIREYEVA, O.K.~~

Preventive effectiveness of dry living vaccine against brucellosis developed by the Institute of Experimental Medicine of the Academy of Medical Sciences of the U.S.S.R. Zhur. mikrobiol. epid. i immun. no.11:62-66 N '54. (MLRA 8:1)

1. Iz Rostovskoy oblastnoy protivobrutsellesnoy stantsii (glavnyy vrach Z.A.Rozova, nauchnyy rukovoditel' kandidat meditsinskikh nauk G.A.Balandin)

(BRUCELLOSIS, prevention and control,
vacc., dry living vaccine)

(VACCINES AND VACCINATION,
brucellosis vacc., dry living vaccine)

CHERNENKOVA, N.A.

Results of special vaccination in the prevention of brucellosis.
Zhur.mikrobiol.epid. i immun. no.11:24-26 N '55. (MLRA 9:1)

1. Iz Rostovskoy oblastnoy protivobrutsellesnoy stantsii (glavnyy
vrach Z.A.Rozova, nauchnyy rukovoditel'-kandidat meditsinskikh
nauk G.A.Balandin).

(BRUCELLOSIS, prevention and control,
vacc., results)

(VACCINES AND VACCINATION,
brucellosis, results)

On the basis of the work conducted
it is recommended:

1. The addition of brucellin
significantly improves the
immune state.

2. It increases the
immune L₁ time.

3. It makes it possible to
the later stages of the disease.

4. It accelerates the
cells both in liquid and on solid

5. On the basis of the work conducted,
the extensive use of

6. It is recommended

ROZOVA, Z.A.; CHERNENKOVA, N.A.; REZNIKOVA, O.Yu.; BOBYREVA, N.D.; KIRNYEVA,
O.K. ~~_____~~

Epidemiologic effectiveness of prophylaxis with dry living vaccine
from the Institute of Epidemiology and Microbiology of the Academy
of Medicine of the U.S.S.R. Zhur.mikrobiol. epid. i immun. 27 no.
10:79-82 0 '56. (MIRA 9:11)

1. Iz Rostovskoy oblastnoy protivobrutselleznoy stantsii.
(BRUGELLOSIS, prevention and control,
in Russia, vacc. (Rus))

KURYAYEV, Timofey Antonovich; CHERNENOK, Mikhail Yakovlevich;
RENSKIY, N.M., retsenzents; LEONT'YEVSKIY, Ye.S., red.;
SARATOV, V.F., red.; MAKRUSHINA, A.N., red. izd-va;
RIDNAYA, I.V., tekhn. red.

[Manual for operators of motorboats and launches] Posobie vo-
diteliu motornoi lodki i katera. Moskva, Izd-vo "Rechnoi
transport," 1962. 210 p. (MIRA 15:9)
(Motorboats--Handbooks, manuals, etc.)

L 33229-65 ENT(m)/T

ACCESSION NR: APS006084

AUTHOR: Kiselev, A. V. Chernen'ko

TITLE: Use of atomulated zeolites
separation of gases and hydrocarbons

SOURCE: Neftokhimiya, v. 2, no. 1

TOPIC TAGS: gas chromatography, gas
separation, helium purification, air

ABSTRACT: Experimental results are
presented for the separation of
helium, nitrogen, oxygen and C₁-C₃ and
effects of carrier velocity, temper-
ature and the Gorkovskaya opytovaya baz-
a (Gorkovskaya experimental research
station) processing scientific research
data. It is shown that the number
of equivalent theoretical plates for
methane was shown to decrease with

Card 1/2

L 33229-65

ACCESSION NR: AP5006084

linear carrier gas velocities of 2. affect the separation of hydrocarbons. analysis of C_1 - C_3 hydrocarbons at 1 for C_2 or higher hydrocarbons. The carbon separations and the various of C_2 - C_3 hydrocarbon pairs can be mixtures. The authors thank E. A. and I.V. Dryakhleva for her assistance. 2 tables, 5 figures and 2 form

ASSOCIATION: Moskovskiy gosudarstvennyy universitet (state university); Opytno-konstruktivnyy komitet po khimii (Automation experimental committee)

SUBMITTED: 28Dec63

NO REF SCV: 010

Card 2 2

YUNEVICH, D.P., kand. tekhn. nauk; CHERNENOK, V.Ya., inzh.

Deep subsurface drainage of floodland peat bogs. Gidr. i mel.
16 no.7:47-54 J1 '64. (MIRA 17:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut gidrotekhniki i
melioratsii imeni A.N. Kostyakova.

S/133/62/000/005/002/008
A054/A127

AUTHORS: Popov, D.I., Candidate of Economic Sciences, and Chernenskiy, D.P.

TITLE: At the Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii im. I.P. Bardina (Central Scientific Research Institute of Ferrous Metallurgy im. I.P. Bardin) Generalizing the practice of using pressurized air in open-hearth production

PERIODICAL: Stal', no. 5, 1962, 418

TEXT: In co-operation with the KMK and Siberian GIPROMEZ, tests were carried out on the feeding of pressurized air into the torch and the bath of 190-ton and 385-ton open-hearth furnaces. Fuel mixtures of coke and generator gas, and, in some cases, mixtures of coke and furnace gas were applied. Among the furnaces not operating on oxygen, those which were investigated yielded the best parameters. The furnaces tested are operated on low-manganese cast iron (with 0.35 - 0.70% Mn and 0.14 - 0.16% P); the liquid pig iron content of the charge amounts to 60 - 62%; steel is top-poured from double-stopper, 200-ton, remote-controlled ladles in 6.0 - 7.6-ton ingots. Some high-alloy steels are poured via an intermittent apparatus. Air at a pressure of 1 - 3 atm is fed into the frontal part of the gas tank

Card 1/2

S/133/62/000/005/002/008
A054/A127

At the Tsentral'nyy nauchno-.....

through a Laval-nozzle with an outlet-diameter of 18 - 22 mm. With an air consumption of 400 - 600 m³/h the ejection coefficient amounts to 3.2 - 4.1. When feeding pressurized air into the gas tank, the smelting time is reduced by 5% and the specific fuel consumption by 1%; the service life of the gas tank lining is not shortened, it is even raised somewhat. Productivity increases by 3.4%, while specific capital expenditure and initial expenses are reduced by 3.2 and 0.3% respectively. When blowing pressurized air into the bath, the smelting time is reduced by 5% and fuel consumption by 7 - 8%. Smelting (on an annual average) takes 11.4 hours in large furnaces and 8.8 hours in small ones. The thermal capacity of open-hearth furnaces makes it possible to reduce the charging time by 30 minutes (at a charging rate of 100 - 110 tons/hour).

Card 2/2

CHERNENZON, I.

Mixed brigades in construction. Sots. trud 6 no. 5:53-57 My '61.
(MIRA 14:6)

(Moscow--Construction industry)
(Wage payment systems)

1. CHERNER, I. B.
2. USSR, (600)
3. Hermaphroditism
4. Discovery of female internal genital organs in hernial sac in man. Vest. khir No. 5, 1952.

9. Monthly List of Russian Acquisitions, Library of Congress, February, 1953. Unclassified.

CHERNER, I.B., (g. Borisov)

Diaphragmatic hernia caused by injury. Vest.khir. 75 no.6:
127-130 J1 '55. (MLRA 8:10)

(HERNIA, DIAPHRAGMATIC, etiol. and patogen.

trauma, surg.)

(WOUNDS AND INJURIES, compa.

hernia, diaphragmatic, surg.)

CHESTER, I.B.

Foreign body in the bladder. Zdrav.Belor. 5 no.7:64 J1 '59.
(MIRA 12:9)

1. Iz khirurgicheskogo otdeleniya gosptalya.
(BLADDER--FOREIGN BODIES (SURGERY))

CHERNER, I.B., vrach; CHIKMAREV, K.M., fel'dsher

Lidiia Mitrofanovna Lobkova. Med. sestra 20 no.3:50 Mr '61.
(MIRA 14:5)

(LOBKOVA, LIDIIA MITROFANOVNA)